

# CLAIMS

- Sub A2
1. An apparatus performing the addition of a PKG recoded number, said apparatus comprising:
    - a circuitry configured to receive at least a first value and a second value, wherein said second value is a PKG value; and
    - wherein said circuitry generates a sum value and a carry value.

- Sub A1
2. The apparatus of claim 1, wherein said sum value and said carry value are dual rail encoded values.

- Sub A3
3. The apparatus of claim 1, wherein said circuitry further comprises:
    - a first adder configured to add said first value and said second PKG value, said first adder generates a PKG value and a carry-out value.

- Sub B27
4. The apparatus of claim 3, wherein said circuitry further comprises:
    - a second adder configured to add said PKG value from said first adder and a carry-in value.

- Sub A4
5. The apparatus of claim 3, wherein said first value is a PKG value.

**THE**

3 receiving a first value;  
4 receiving a second PKG value; and  
5 generating a sum value and a carry value from said first value and  
6 said second PKG value.

2 final c

15

1        16. The apparatus of claim 15, wherein said final sum value and  
2        said final carry-out value are dual rail encoded values.

[illegible]

1            17. The apparatus of claim 15, wherein said first value is a PKG  
2   value.

1            18.    The apparatus of claim 13, further comprising:  
2            means for converting at least one dual rail encoded value into said  
3            second PKG value.

1           19. An apparatus performing the addition of PKG recoded  
2   numbers, said apparatus comprising:  
3           a circuitry configured to receive at least two PKG values; and  
4           wherein said circuitry generates a PKG value and a carry value.

20. A method for performing the addition of PKG recoded numbers, comprising the steps of:

- receiving a first PKG value;
- receiving a second PKG value; and
- generating a PKG sum value and a carry value from said first PKG value and said second PKG value.

- 1            21.    An apparatus for apparatus performing the addition of PKG  
2    recoded number, said apparatus comprising:  
3            means for receiving a first PKG value;  
4            means for receiving a second PKG value; and  
5            means for generating a PKG sum value and a carry value from  
6    addition of said first PKG value and said second PKG value.

Add B<sup>7</sup> >

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